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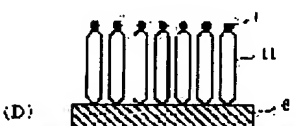
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## (54) CARBON NANOTUBE



### (57)Abstract:

PROBLEM TO BE SOLVED: To provide a carbon nanotube directly synthesized and grown on the surface of a substrate and moreover arranged at high density and high precision.

SOLUTION: This carbon nanotube 13 is obtained in such a manner that molecules 4, which have lumens, the circumferences of which are coated with protein 2, and in which inorganic material atoms 1 are held to the lumen parts, are expansively arranged on a substrate 6, thereafter, the inorganic material atoms 1 remaining on the substrate are synthesized as seeds by removing the protein. As the protein molecules 4, viruses, the ferritin family (such as ferritin and apoferritin), DpsA protein or MrgA protein is used. As the inorganic material atoms 1, any of iron, an iron compound such as iron oxide, nickel, a nickel compound such as nickel oxide, cobalt, a cobalt compound such as cobalt oxide is used, and as the synthesizing method, a CVD method may be used.

## LEGAL STATUS

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